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ADDRESSES

President's Address Delivered before Medical Society of the State of California April, 1900.

By GEORGE CHISMORE, M. D.

Permit me, in opening this session of your Honorable Body, to call attention to some points wherein a modification of your present procedure will, in my opinion, prove beneficial. Article II, Section 8, of our Constitution, as it now stands, is mandatory. The secretary must " drop from the roll " the names of all members delinquent for dues, who do not pay before the expiration of one month after notification by mail. Under the working of this rule it has happened the past year, that money for dues has reached the secretary after the sender has been dropped. To lose a member under such circumstances is poor policy. It would better secure the interests of this society to provide for such emergencies by conferring upon the president discretionary power to direct the secretary, in such cases, to receive the dues and reinstate the delinquent. The question of membership is a vital one, and we cannot give it too much consideration. For more than thirty years this society has been in existence. It is duly affiliated with the American Medical Association, and it is on excellent terms with the local medical societies of this State. From its opening session to the present time, it has numbered among its members the leading physicians of this Commonwealth, and they have striven steadfastly in its behalf. With all these advantages, with the obvious need of association, why is our membership so limited; why do nine out of ten of the duly qualified, licensed practitioners of this State neglect to join our ranks? Not the least of the causes that in the past have led to this state of our affairs has been the recurring struggles of the various medical colleges of this State to gain recognition or control of this society. Dissensions thus engendered have led to the withdrawal or estrangement of many members, some of whom we could ill afford to lose. While we recognize with gratitude the valuable services of the professors of the several faculties and cheerfully accord them the honors that are justly their due, would it not be well to have it plainly understood that this society is not to be made the appendage of any college, that it will submit to the dictation of none, and that hereafter its affairs will be conducted wholly with a view to the interest of the entire medical profession of the State. Already some of the disaffected have taken the initial step toward the formation of a rival state society. In some of its aspects such a consummation might, perhaps, be not altogether undesirable. It might remove a disturbing element from our midst; aside from this, I fail to see how such a proceeding could promote the interests or add to the honor of the medical fraternity.

Although this society, in common with all similar organizations in new countries, has encountered many difficulties and trials, it has surmounted them all, and is, and will continue to be, the exponent of what is best and purest in the medical profession of this State. It rests with you, fellow members, to plant it on such a basis as will make its membership so desirable that no reputable practitioner within this State can afford to remain outside its fold. It is founded on the firm basis of a general need—that of association on the part of those whose interests are identical, and, if its affairs be wisely conducted, it is needful that we should diligently cultivate our legitimate field—the science and art of healing the sick. Let us then, in the spirit of harmony and good fellowship, devote our loyal efforts to its service.

Already papers have been read before your Honorable Body that have attracted attention and elicited the favorable comments of the profession at large. Our young members have shown commendable capacity in original research; our elder ones have given freely the valuable results of ripe experience. Who is there among us who has not gained some point of lasting benefit in his practice from our sessions? How many warm friendships and pleasant memories have grown out of our annual gatherings; it is self-evident that such meetings are greatly to our benefit, both professionally and socially. Let us strive to make them still more so in the future. There is but one available field for the State Medical Society here; we acquired it by priority; we hold it by possession, and, undismayed by threats of the disaffected, we shall continue to occupy the ground. Let us hasten to declare that in what is here spoken there is no word of bitterness; no wish to stir up strife; my only desire is to proclaim the merit and uphold the dignity of an institution that is very near to my heart.

We must not only do good work, but we must publish it properly. To print and distribute the annual transactions requires a great amount of time and labor on the part of the Chairman of the Committee on Publication, and it is no more than just that he should be allowed a reasonable compensation for his services. I therefore recommend that such sum as may be thought proper by the Society be appropriated for that purpose. In connection with the subject of publication, I would suggest that a proof slip of the remarks of each member taking part in discussion be submitted to him for correction, before passing to print. To prevent delay, should the corrected proof not be returned within a reasonable, specified time, the matter may be printed as reported.

In regard to the transactions of your last session, such were the merits of various papers read before you that I deemed it advisable to have 1,700 copies (omitting executive matter) printed and distributed to the gentlemen of the regular medical profession, who are not members, throughout the State, in order to call their attention to our work, and in the hope of inciting them to apply for admission. Before taking this step (involving as it did an expense of $443 for printing and mailing), I sought the advice of every member of the Judicial Council, and all were unanimous in its favor. It rests with you, fellow members, to decide whether this expenditure meets with your approval.

The efficient Chairman of the Committee on Arrangements, Dr. Harry Mitchell Sherman, has added a new feature to our plan of work. From time to time during this session, invitations will be announced from the Chair to all members, who desire to attend clinics and hospitals where operations and other matters of professional interest may be going on.

Let me, in closing, submit a plan for increasing our membership, so practical that I earnestly beg you to adopt it at once. It will be an easy task for each member to secure at least one applicant from the circle of his friends in the profession. Some can procure many if they but try. We can double our list within the coming year by this simple measure if we only make the effort. Expressing my gratitude to the gentlemen of the various committees and all those who have volunteered to present papers, and thanking you for your kind attention, I will no longer keep you from your labors.

705 Sutter St.

ADDRESS

Delivered at the Meeting of the San Joaquin Valley Medical Society, March 13, 1900.

By E. C. Dunn, B. Ph., M. D.

In welcoming you to the ninth semi-annual meeting of the San Joaquin Valley Medical Society, my duty is one of congratulation. You will all unite with me in a feeling of pride and gratification in our organization. While our beginning was modest, and the membership does not as yet comprise at least a majority of the regular practitioners of the valley, still the interest in the work of the association, and the practical benefit to the individual member has grown from session to session, until to-day we can speak with assurance not only as to our society's future permanency of existence, but as to its coming recognition as one of the foremost institutions of its kind in the State. In view of these considerations it becomes incumbent on each individual member to constitute himself a committee of one to bring to the notice of his brother practitioner, who has not yet enrolled himself upon our roster, the merit and benefits of the society, and induce him to join with us.

Among the many institutions devoted to the advancement of medical education and the attainment of a higher professional standard, none present more immediate practical and beneficial results to the busy practitioner, than the well organized and properly conducted medical society. The benefits to be derived from the intercourse of physicians in such associations are inestimable. The personal gain is in the fact that barriers due to petty jealousies fostered by non-intercourse are broken down; professional misunderstandings being more easily and quickly adjusted, and less apt to occur; new interest is developed in old subjects, the physician often learning to his surprise that there are many things to learn concerning the diseases we consider ourselves most familiar with; ideas are broadened, the experience of others throwing new light upon our own, and habits of study and close observation are inculcated and fostered. The gain to the profession as a whole is in the fact that in union there is strength, associating ourselves together gives us a higher standing and more influence in the community; the medical code is better understood and more carefully observed by all; medical legislation and other benefits to the profession at large are made possible and more probable.

No practitioner, be he old or young, of vast or limited experience, can afford in justice to himself not to associate with his city and county, district and state society. Should he adopt such a course, the loss is his, not that of the societies. This is especially true of the young practitioner. Active participation in society work, preparing and reading papers, and the serious discussion of those presented by others, is one of the most potent of educational factors. To conscientiously prepare an article upon any topic is of more benefit at all times to the author than to the hearer. A certain writer tritely says: "There is nothing which teaches one so much, or shows one how little one knows of a subject, as the attempt to put one's ideas upon paper." To the busy doctor, with his multitudinous duties, his social, professional and business engagements, the medical society comes to him in the nature of a welcome clinic, and especially is this true in the line of treatment and diagnosis. The most accurate diagnostician is at all times the best physician. You have probably heard of the 'Dutchman,' who, having procured a book of medical formulæ, remarked that now all he needed was a book which would tell him what was the matter with people, and he could cure the ills of the world. While it is eminently essential that judgment and discrimination should be used in the treatment prescribed to each individual patient, and evidently the 'Dutchman' was blissfully ignorant of such fact, still he unconsciously emphasized the greater importance of the diagnosis over that of the treatment, as the latter may be varied, but the former must be positive and accurate. The best diagnosticians make mistakes, and it is only by continuous study, investigation and comparison of experiences that we are enabled to become so familiar with all the symptoms and their conditions in and relations to various diseases that we are prepared to understandingly differentiate in our diagnosis. Now, where can we do this to better practical advantage than in our medical societies, stimulating as they do study and investigation in the preparation of papers and a broader understanding of the subject through the comparison of experience in both treatment and diagnosis brought out by the discussions. We cannot all be specialists and thoroughly equipped pathologists; but in our societies we get the benefit of the practical experience of these practitioners. Since the advent of medical societies we do not hear so frequently of retinitis nephritica being mistaken for some organic eye lesion; of a lumbo-abdominal neuralgia being diagnosed appendicitis; of an operation being contemplated upon some pelvic organ where hysteria has simply simulated some grave trouble; of the presence of neurasthenia being overlooked in the complication of many diseases; or of the diagnosis and prognosis of total deafness in a case of inspissated wax. No; the educational influence of the constant intercourse of physicians in the society, with its accompanying interchange of ideas and experiences is too potent upon the regular attendant to admit of many repetitions of such errors in diagnosis.

Another and most important benefit derived from the medical society is in its marked effect in discrediting commercialism in medicine. And this, my professional brothers, is a hydra-headed vandal! shown not only in the flaming, shameless quack advertisements of the daily papers, but in the many and various devices of some to keep within the pale of the code and yet obtain all the advertising possible. No greater truism was ever written than that, "Medicine is a glorious profession, but a vile trade." Indeed, medical ethics are based on the principle that medicine is a profession and not a trade, and the very spirit of this principle forbids the professional man to reserve to himself any discovery in medicine or surgery he may have made or acquired. Professional honor and philanthropy binds every medical man to contribute freely to the profession whatever discovery he may make that will in any degree alleviate the suffering of humanity and promote their restoration to health. Do not misunderstand me. I believe the laborer is worthy of his hire and that no profession is more deserving of pay and better pay than ours for honest conscientious work. But I do decry this spirit of commercialism showing itself in a disposition to devise new instruments and then patent them; discover new methods of treatment and keep them secret; cultivate acquaintance with newspaper men with the purpose of having their names exploited frequently and upon all subjects, or adopting every new fad in medicine that comes along—all done with the chief object of making the most money and obtaining the most advertising possible, rather than working with the main object of advancing medical learning and bettering the condition of suffering humanity.

The great importance of the medical society and its manifest influence upon the medical profession is my excuse, if one is needed, for having occupied your attention with this subject at this time. That I am not mistaken in my estimation of this influence is demonstrated by the rapid and continued increase of medical organizations all over the country.

In concluding I desire to say that the growing tendency to require a higher and more thorough course of study in our medical schools to-day I believe is due directly to the influence of the medical society. And had no other good been accomplished this in itself would be ample justification for their existence. And now allow me to make this prognosis that, as we have in the San Joaquin Valley the greatest and best valley in this glorious State of California, so in the San Joaquin Valley Medical Society we will have one of the best, if not the best, district medical society in our Commonwealth.

ORIGINAL COMMUNICATIONS.

THE PREVENTION AND TREATMENT OF INFECTIOUS DISEASES OF THE CORNEA.

Read before the Medical Society of the State of California, April, 1900.

WILLIAM ELLERY BRIGGS, M. D., Sacramento.

Statistics ascribe to primary corneal disease nine per cent of the blindness that occurs in both eyes. Purulent conjunctivitis, trachoma and other eye affections producing blindness by secondary disease of the cornea, are the cause of twenty per cent of the totally blind. It may, therefore, be stated that corneal suppuration, both primary and secondary, is responsible for the unhappy condition of approximately one-third of those who are totally blind. This is a particularly lamentable fact when we realize that most of these cases are preventable and that this sad result is due to neglect or improper treatment. All efforts at transplanting healthy cornea to take the place of the opaque membrane have proved failures, therefore, when the corneal transparency is once impaired the usefulness of the eye is, to that extent, permanently injured.

A large percentage of these infectious troubles are acquired in the country by harvest hands or miners, who, after some abrasion of the cornea, continue to work in the dust and frequently wipe the eye with a dirty handkerchief or with filthy hands. Other common sources of infection are catarrhal or suppurative disease of the conjunctiva, dachrocystitis and ozena, and also from inoculation of the cornea from skin affections in the neighboring parts. Phlyctenular keratitis often originates in this manner. The latter disease is not infrequently produced in children by migration of germs from the nasal cavity in cases of adenoids or chronic disease of the Schneiderian membrane. Children suffering from nasal stenosis are badly nourished, and the cornea is, therefore, less able to resist the invasion of pathogenic germs. Most of these cases, first come under the observation of the family physician; it, therefore, seems to be particularly fitting that a discussion of the pathology and treatment of infection of the cornea should take place in this society, which is composed largely of general practitioners. The knowledge of the importance of these troubles and the best treatment for them will save the sight of many patients with whom a few days' neglect will result in irremediable blindness.

Clean aseptic wounds of the cornea heal very kindly by first intention leaving scarcely a perceptible scar. This is often seen after cataract operations in which the healing process has gone on smoothly when only an expert can tell that the eye has been operated upon. Abrasions of the corneal epithelium that are clean and remain free from pathogenic germs heal with amazing rapidity. There is no infiltration about the wound, and it often happens that no trace of it can be seen a few hours after the accident. When the corneal wound becomes infected the healing process is quite different. The cornea does not seem as well able to cope with micro-organisms as the conjunctiva. The phagocytes or migratory cells are abundant in the conjunctiva and in infection of this membrane they promptly form a barrier against invasion of the healthy tissue. Not being normally present in the cornea it takes longer for them to reach an infected wound of that region. The central part of the cornea is especially favorable to the development of microbes as they are there less readily reached by the migratory cells. Septic ulcers of the cornea have a gray or grayish yellow appearance which is caused by the detritus and necrosed tissue destroyed by the germs. The tissue surrounding a septic wound of the cornea becomes filled with migratory cells producing the characteristic infiltration. The pericorneal vessels become enlarged to facilitate the advent of the phagocytes in their process of checking the progress and multiplication of germs. If the conditions are favorable the microbes are destroyed and thrown off with the necrosed tissue, and the resultant ulcer is in a favorable condition to heal. The infiltration about the wound is absorbed, and if the loss of substance is small no trace of the injury will be seen after a very few days or weeks. The migratory cells assist in the healing process by digestion, absorption and removal of the granular and other substances that have been thrown off and are not suitable for nourishing the cornea. These cells are also found swarming around other foreign and deleterious substances which interfere with healthy nutrition of the cornea. I have mentioned the fact that non-infected wounds of the cornea heal with amazing rapidity, and it is equally true that infected corneal wounds cause rapid destruction of this membrane. In cases of virulent infection the whole cornea may be destroyed in a few days. Ulcerative disease of the cornea is always of microbic origin. The severity of the trouble depends upon the kind of microbe causing the infection, and may be influenced by the condition of the patient's general health. Staphylococcus and streptococcus are most commonly found in corneal infection. Pneumococcus is generally found in serpiginous ulcers and gonococcus in ulcers infected from gonorrheal disease. The lachrymal secretion has, undoubtedly, a mild antiseptic action. Were this not the case destruction of the cornea would be much more frequent as the eyes are rarely free from exposure to pathogenic germs. The lashes are generally filled with such microbes, and healthy eyes are constantly exposed to various kinds of infective material. The study of bacteriology during the past twenty years has revolutionized our views of the pathology and treatment of these diseases. We are largely indebted to the experiments and researches of Leber for the exact knowledge that we possess on the subject.

Much can be done toward the prevention of these troubles by proper attention to predisposing conditions. Cases of dachrocystitis should be cured by dilatation of the lachrymal passages and irrigating the sac thoroughly with appropriate solutions. Patients who cannot afford the requisite time for this treatment should have the sac extirpated. The early relief of this trouble is very important as a large percentage of cases of corneal infection are due to the pathogenic germs that are always present in the secretion. If a slight corneal abrasion occurs in the course of this disease it is very likely to take on destructive suppuration, and sight may be lost in a few days.

Ophthalmia neonatorum is perhaps the most frequent cause of infective ulceration of the cornea and resultant blindness. It is rare that this unfortunate termination occurs in cases that receive proper care from the inception of the disease. The number of these cases would be materially lessened if the obstetrician would use Crede's method of instilling a few drops of a two per cent nitrate of silver solution into the eyes of all infants of parents who had been infected with gonorrhea. Gonorrheal ophthalmia is another disease that is very likely to cause destructive corneal ulceration. When the cornea is once infected little can be done to check its spreading, for the purulent secretion is so constant and abundant that as soon as the germs in the wound are destroyed it becomes reinfected. The treatment should be directed to the prevention of corneal ulceration. Trachoma not infrequently causes injury to the corneal epithelium that predisposes to suppurative and destructive processes. Catarrhal ophthalmia is a common cause of infective ulceration of the cornea. Patients with chronic catarrhal conjunctivitis often neglect this disease until some slight wound of the corneal epithelium takes place and infection follows. Entropion and ectropion predispose to corneal infection. The former by the constant injury the inverted lashes do to the corneal epithelium thus preparing a favorable channel for the entrance of the ever-present pathogenic germs, the latter by the exposure of the cornea to deleterious substances. Lagophthalmos also leaves the cornea exposed and tends to the production of catarrhal conjunctivitis and corneal infection. Nasal diseases in which pathogenic germs are abundant are a frequent source of infection of the cornea. This is an additional reason for urging the thorough treatment of ozena, adenoids and other nasal disease.

A great deal could be accomplished if more care were given to slight corneal wounds. This is especially important in patients who work in the dust or are exposed to filth. The infecting microorganisms are nearly always introduced from without, through some lesion of the corneal epithelium. When the epithelium is intact it offers an almost insurmountable barrier against the entrance of germs. The use of sulphate of zinc and other irritants must be scrupulously avoided in cases of corneal injuries. As a very large proportion of cases of serpiginous ulcers—the most serious form of infected ulcer of the cornea—occur in harvest hands and miners who work in dust, great care should be given to all wounds of even slight nature which are found in the corneas of such patients. After the removal of all extraneous matter the conjunctival sac should be thoroughly irrigated with some mild antiseptic solution and an antiseptic compress applied. The physical condition of the patient has a marked influence on the healing process. In patients suffering from pneumonia, enteric fever, marasmus or other profoundly depressing condition infection of a slight corneal wound is sometimes followed by total destruction of the cornea in an incredibly short time. Less can be accomplished in our efforts to check the ulceration in weak and badly nourished patients. It seems to me, however, that too much stress has been laid upon this point by writers on the subject for the reason that most of the patients who have come under my observation have been young and vigorous harvest hands, miners, etc., whose eye troubles seemed to be entirely due to local conditions. Little can be expected from general treatment as the progress of these cases is as a rule so rapid that the usefulness of the cornea is destroyed long before constitutional measures could have taken effect.

The first indication in the treatment of infected ulcers of the cornea is to render the ulcer and all sources of infection aseptic. The condition of the ulcer, the state of the patient's health, the character of the infection, and the extent of the trouble will influence us in the selection of suitable treatment. Occasionally infection of slight extent and of mild character will be successfully dealt with by the unaided efforts of the migratory cells. In other cases compresses moistened with mild antiseptic solutions will accomplish the desired end. Hot fomentations increase the flow of the migratory cells to the infected areas and are therefore to be preferred in infected cases. Severe cases demand more active treatment. If the infection is virulent in character the ulcer should be touched with a strong antiseptic solution to destroy the germs. Formalin 1:60, pure carbolic acid, tincture of iodine, or methylene violet are suitable in these cases. Curetting the ulcer is sometimes practiced but it has not been as successful in my hands as the remedies mentioned above. The honor of introducing the method that has proved of greater value than any other at present known in checking corneal infection belongs to a San Francisco oculist, the late Doctor Martinatche. It is to be regretted that Dr. Martinatche did not live to see the actual cautery universally adopted as the remedy par excellence in the treatment of infectious processes in the cornea, as it is to-day. Twenty years ago the incision of Saemisch was generally practiced in cases of serpiginous ulcers. To-day the galvano-cautery is found to be vastly more successful in checking the ulceration and in preventing anterior synechia which was very common as a result of the incision. The galvano-cautery has superseded the actual cautery used by Martinatche because of its greater convenience of application and its more exact control. It must be used with great skill and delicacy to obtain the best results and to avoid doing harm to healthy parts. It is hardly necessary to mention that so potent an agent improperly applied may be quite as disastrous as the disease itself. A light handle should be selected with a fine cautery point. The point should be brought to a red heat and the infected area quickly touched at such intervals that all the germs are destroyed. The things to be particularly guarded about are not to have the point too hot and not to go too deeply into healthy tissue. If points of infection be found a few days after the first cauterization another application should be made and repeated as often as the ulcer is found to be infected. Previous to cauterization the eye and lids as well as the lachrymal passages should be thoroughly cleansed. After cauterization a one per cent solution of methylene violet may be instilled or a little iodoform dusted into the eye and an antiseptic compress applied. In case there is muco-purulent secretion the compress should be renewed at proper intervals and the eye washed with a mild antiseptic solution. If the ulceration is extensive the compress must be continued until the cornea has completely healed in order to prevent bulging of the ectatic membrane. In most cases of severe infection iritis co-exists, and it will generally be well to instill atropine of one per cent solution. In cases of marginal ulceration with threatened perforation eserine will be indicated to prevent prolapse of iris.

Hypopyon if small in quantity may disappear by absorption when the ulcer has taken on healthy action. If large filling the anterior chamber to a third of the space to the pupillary border—it should be evacuated by an incision at the lower corneal margin with a von Graefe's cataract knife. If, as often occurs, the hypopyon is firm and fibrinous it may be necessary to assist its exit with the forceps or with a syringe and sterilized water. Unless the pus formation has ceased it will be well to keep the wound open for a few days. Sub-conjunctival injections of bichloride still have strong advocates. Dr. Darier uses a solution of mercuric cyanide 1:5000 with 2:100 of common salt for subconjunctival injections. He claims that it is less painful and quite as efficient as the bichloride. He does not, as some have supposed, neglect the use of the galvano-cautery and other adjuncts to the treatment of these cases.

The important practical points that I have tried to bring out in this paper, and which I desire to emphasize are as follows: 1. All corneal infection, in the absence of constitutional disease, comes from without and gains entrance through some lesion of the epithelium. Every corneal wound should, therefore, be thoroughly cleansed with a mild antiseptic solution and an antiseptic compress applied. 2. Injuries of the cornea are especially dangerous in the presence of suppurative disease of the conjunctiva or lachrymal sac. Active measures must at once be taken to render the wound aseptic and to prevent new infection. 3. When infection of a corneal wound has become established the active focus should be treated with the stronger antiseptics. In grave cases the galvano-cautery offers the most efficient means. 4. When patients complain of having "taken cold" in the eye, that organ should be carefully examined for foreign bodies and corneal abrasions, the most minute being readily detected by the instillation of fluorescein solution. Sulphate of zinc or other irritants should never be prescribed until the existence of a wound has been positively excluded.

FAULTY EDUCATIONAL METHODS AS A FACTOR IN THE PRODUCTION OF INSANITY AND OTHER FUNCTIONAL NEUROSES.

Read before the Medical Society of the State of California, April, 1900.

By J. W. Robertson, M. D., Livermore, Cal., Professor of Nervous and Mental Diseases, Medical Department of the University of California.

Many perplexing questions, as to etiology and prophylaxis of both insanity and other functional neuroses, are so intimately associated with the work of the general practitioner as to demand from him a thorough study of those problems, to which our modern civilization and methods of education have given rise.

Insanity is still regarded very much as the ancients viewed it, not as a physical disease, and, like other physical diseases, the result of a direct evolvement of natural laws, but rather as a divine infliction, a curse to be denied and hidden as if it were a crime. Even the more intelligent consider it, not as they would a fever or other physical sickness, but as some peculiar and ill understood affliction that could hardly be explained by natural laws. Early investigators of mental phenomena studied the soul and mind as apart from the body, and, early in the 19th century, it was hotly debated whether or not the mind was dependent on the brain. Spurzheim as late as 1820 adduced many facts, now so well accepted as to appear trivial, in his efforts to establish this thesis. Just as psychology has been transformed from a study of the ideal and intangible soul to a discussion of living and organic changes in the human brain, so is the study of the diseased mind confined to the pathology of various organs of the body. Even today the close relation, existing between diseased bodily organs and mental disturbance, is not thoroughly understood. Too often the first symptom is regarded as a causative factor. How frequently it is asserted that business worry, overstudy, religious excitement or some emotional state is the exciting cause, when the condition is really symptomatic of the developing disease. To understand the real relation such conditions bear to the production of the functional neuroses, it is necessary to study the nervous diathesis, which in the very great majority of cases underlies their development. By the term nervous diathesis I do not mean a disease, but a bodily predisposition to a group of diseases, each differing from the other, yet all closely related by reason of the similar hereditary conditions under which they develop. It is held responsible for our greatest blessings and our most severe afflictions. It includes a group of neurotic tendencies, manifesting themselves in many different diseases, yet all closely allied because of family association. We have, included in the same group, epilepsy, chorea, megrim, hysteria, neurasthenia, dipsomania and insanity.

In addition to these, certain mental states exist hardly to be called diseases, yet certainly pathological. The brain is not disordered, yet it is ill balanced and unduly developed in certain directions. Amongst them is included the man of genius, the great orator, the musician, the inventor, the reformer, the ascetic, the crank and the criminal. Lombroso and his school claim that such individuals are ill balanced and irresponsible, and, though they possess such gifts, they are so abnormal mentally and physically as to be properly classed amongst the degenerates. Nordeau goes still further and attempts to prove that nearly all the great men of ancient and modern times, who have attained any great success in life, have done so because they bear well-marked stigmata of degeneration, and, in the broad sense of the term, could be called insane. I can possibly better illustrate what the term nervous diathesis means, by detailing the history of a neurotic family. Its father was a man of vigorous personality, strong of brain and in excellent bodily health. From early manhood, in order to more easily accomplish his work, he had indulged excessively in alcoholic stimulants, yet never to the extent of intoxication. The mother was a gentle woman of delicate nervous organization and a refined mental temperament, worrying over trifles, excitable, and, at times, suffering from the milder forms of hysteria. A family of eight children was born to them. In childhood high and frequent fevers without adequate cause were observed. Their dentition was frequently complicated by convulsions, and, at the age of two years, epilepsy developed in one of the children. Another child, delicately molded and extremely precocious, could read at the age of three, and displayed considerable ability as a musician. She was sent to school when six and was soon regarded as an infant phenomenon, advancing rapidly in her studies. She failed to develop physically, and early suffered from astigmatism. At the age of twelve, owing possibly to a slight fright, she became choreic, improved, relapsed at the end of three months, and finally recovered, except for slight habit spasms. A third child apparently normal and giving but little evidence of any unusual nervous or physical disturbance, yet developed a megrim at the age of sixteen. Another daughter had always shown a certain weakness of body, a poor appetite, digestive disturbances and constipation. Puberty developed late and the body remained ill nourished. Like the mother she was nervous, and, at times, morbid. An unhappy marriage and the too frequent bearing of children resulted in a permanent melancholia. The oldest boy was fairly bright, but proved decidedly unruly in the school, and refused a University education. He worked faithfully and untiringly, and rose to the head of a large business establishment, manifesting no bodily or mental peculiarity. The second son was excellently endowed. At an early age he exhibited marvelous mental activity, rapidly passing through the various grades of the common schools and entered the University when barely sixteen. His university course was most brilliant. He was the honor man of his class, was an excellent debater and led in religious work. What was given him to do he did well, but his mentality was one of doubt, and he could not decide upon his life work. He went to Harvard for a post-graduate course, then to Germany. While there he found brain concentration impossible, worried much over trivial affairs and became very despondent. There soon developed serious stomach derangements and he suffered greatly with intestinal dyspepsia. He returned to his home depressed, overwhelmed with morbid fears, incapable of prolonged mental efforts and remains a confirmed neurasthenic. Another son, with very much the same history, studied law, rose rapidly in his profession, and, except for occasional dipsomaniac outbreaks, is fairly successful. The fourth son was not bright, took but little interest in his studies, shirked when possible, left school at an early age, consorted with evil companions, and seemed unable to comprehend his moral delinquencies. He left home, wandered from place to place, gambling and dissipating and finally became a confirmed criminal. In this family group only one became insane. The reason for this development of insanity the family could not possibly conceive, honestly denying insane heredity, yet every member of the family, except one, presented either physical or mental stigmata of degeneration. We do not necessarily look to either parent for the cause, but to an unfortunate commingling of two temperaments, each in their way tending to degeneration. It may not show in either father or mother, yet it surely will be exhibited under various guises in the children.

I am convinced that no case of megrim or idiopathic epilepsy develops except by reason of hereditary tendency and unwise environment and education; that chorea and hysterical manifestations are equally the result of this diathesis, and that at least 90 per cent of those who develop insanity possess this nervous heredity. Wise prophylaxis may materially mitigate this hereditary tendency, and, for this reason, the family physician should stand on guard, carefully observe, and attempt, not the cure, but to prevent these diseases. Whatever builds up the body and strengthens the general system is to be advised and all over-taxation of either body or brain is to be avoided. Especially is he called upon to study those problems to which our modern civilization and methods of education have given rise.

I cannot here discuss the relation which civilization bears to the increase of insanity or even whether this is a real increase and will, with advancing civilization, lead us to moral perversion and mental bankruptcy. All that can be said at present is that the stress of modern civilization is so great, the active struggle for existence so keen, and the greed for wealth and public honors so integrally a part of our mentality, that not only do individuals struggle fiercely for the attainment of personal ambitions, but the root of the evil goes deeper. The peculiarity of our American civilization is the free competition which is the basis of all success. Every American is a self-made man, and, necessarily, his physical, mental and moral equipment are very important factors in the amount of success he achieves. In this competition, whether for wealth, honors or professional reputation, the child of the rich man or the one of high social position has no advantage over the son of poverty. In fact, such advantages are oftentimes regarded as a handicap in the race of life. The same road is to be traveled by both, their education is equally provided and the issue depends solely on their ability to work. The stronger the incentive the greater will be the application. A strong brain, judiciously trained, is the only prerequisite, and this single fact is seized upon as sufficient reason for pressing education to the limit. Many of our successful business men are not possessed of such literary and classical knowledge as in former times constituted an education, yet, in another sense, they are all educated, and educated broadly. Their school has been one of business and public affairs, and they have been strengthened, broadened, and sharpened by contact with other intellects equally aggressive and active. Knowing their educational deficiences and their lack of even the most elementary school requirements, they have developed an undue respect for book learning, and, actuated by the broadest philanthropy, have given their money freely and have so exerted their political influence, that the State should most liberally provide the very best training and education possible. So thoroughly is this accepted by the public and so rigorous has its enforcement become that, no matter what the mental endowment of the child be, no matter how frail its body, how delicate its nervous organization—let its mental and physical requirements be what they may, the one course is enforced, irrespective of its natural peculiarities or fitness for specialized knowledge. Too much has been expected and too much exacted of our public school system, until, in these late years, a popular clamor has arisen, led by the teachers themselves, protesting against the absurdities that visionaries have, from time to time, introduced. A writer in a recent popular periodical startled the public by the assertion that in five of our cities sixteen thousand children had been removed from our schools because of shattered nervous systems, due to overstudy. While, if true, this would be a humiliating commentary on our effort at self-advancement, I regard their removal as so much gained—as a stitch taken in time. My sympathies go out to the other thousands who can and do pursue the course to the bitter end. If a school education brought with it all the good results that are popularly supposed to follow such advantages, it might be well even to suffer a few ills in order to accomplish so great a good. Does the end justify the means? The law allows the child to begin its education at the age of six. Parents take advantage of this either because they really believe that systematic study of books should begin at this age or because it offers an easy method of ridding themselves of much noise, maternal government and the responsibility of personally caring for their children. The primary grades are nurseries and the teachers should be nursemaids. If she attempts to seriously carry out the theory and practice of teaching, the same results follow as when an arm is thrust in to stop a rapidly revolving wheel. The spokes may break or the arm may break. At all events there is a jar and disarrangement of the normal relations. As a rule the teacher is but the graduated pupil; and her nervous system, already shattered by the course she has run, breaks down under this added strain. At school the tender and receptive mind is easily influenced. In place of object lessons carefully selected and instilled by a loving mother, theoretical discussions of numbers, scientific explanations of physical phenomena, natural history and geography, the cultivation of the eye for the form and reproduction of letters, the meaning of numbers and the study of oral and written language, reading, writing, drawing, music and physical culture; all this in the sixth year of the child's life, during which time it is compelled to sit four hours each day, upright and motionless, suppressing all animal spirits or evidence of other thought than that of deep self-absorption. It must either study or pretend to study, and, for the sake of discipline, self-control is rigidly enforced. The next year brings spelling, sewing, health lessons, humane education and the cultivation of a parrot-like memory. Then follow history, composition, hygiene and arithmetic, mental and oral. In the grammar grades all these studies are pursued in their more complex form, where mental gymnastics are indulged in and more profound problems are discussed. Grammar, word analysis and the sciences are cultivated, the hours of study being increased to five, and this imprisonment is often prolonged for infraction of rules. It is amongst these children that choreic movements begin, and the foundation is laid for the development of the other neuroses. Compulsory education here ceases and the majority of children have received practically all the instruction that they will get from books. Had they really absorbed the vast mass of instruction which, for nine years, had been poured into them, great indeed would be their knowledge. But it is only a few who have drunk to the full, while the great majority go unscathed; the multiplicity of study having simply confused, no one thing is learned thoroughly. They can read, they can write, they possess all necessary knowledge of arithmetic, and have a smattering of geography, history and the English language; although much else has been poured into them, they are the happy possessors of a large overflow pipe, and no real damage has been done. They are usually happy hearted, roystering children, caring far more for play than study, and, as quickly as possible, they forget all except the rudiments. I do not regard these studies as nearly so serious as I do the enforced quiet and the self-control necessary to maintain the discipline demanded.

Another factor, largely responsible, is the teacher in charge. As a rule she has some fifty or more scholars in her class. Could she give each one of them personal attention to the exclusion of the others, each would be entitled to about three minutes per day. This effort to do something, with no possibility of accomplishing it, wears on her own nervous system. She cannot really teach. She becomes desperate and nags unceasingly at the little twisting, squirming creatures, whom she must control. She does her duty as the public requires it, but at a fearful cost both to herself and her children. No child should be subjected to this restraint till it is at least ten years of age, and better twelve. Three hours of real mental application, intelligently and willingly expended, is enough for any child, and I believe that greater educational advance, even according to our present standards, would be made. To this could wisely be added an hour of home study.

I realize that this is a Utopian plan, and so long as the child has the modern American mother it could not be carried out. Over all the land the cry would be raised: "What are we to do with our children? How can we care for them? They will drive us wild." These mothers have also been educated and are the finished products of the educational and social mill. Mostly they are nervous wrecks, yet if they would resign from their "Browning Club," and leave their "Shakespeare Society" to the childless, drop their fads, and limit their social obligations, they could occupy their time far more profitably, both to themselves and their children. The childish mind must be occupied and will not lie dormant. There must be some exit for their mental activity. If mothers will not take a few hours each day in directing the mental development of their children, by all means we should resort to kindergarten. Practical educators are probably right in saying that children, trained in kindergarten work, are not trained to study, nor are they properly disciplined; yet it does occupy and amuse the childish mind and renders it fallow for the life work to follow. A child properly trained, with mind judiciously filled with well-digested facts, will advance far more rapidly and at a less mental and physical sacrifice, if its school life begins at ten rather than at six. These defects are neither of personal nor recent discovery, but, by teachers themselves, have been most strongly dwelt upon. Why then continue it? There is a goal which all seek and few attain. It is called a "University" education, and those who have successfully run this course are supposed to have attained the summit of human knowledge. So eagerly is its training sought and so many have applied for entrance that, in self-defense, its standard has been raised higher and higher until admission now demands a mass of knowledge greatly in advance of that required but a few years ago. This has in turn compelled an advance in the country as well as city schools, for it is an endless chain. To possess a high school education, which is not accredited to the "University," is to bring discredit on principal and teachers alike. These likewise demand from the grammar schools a certain standard which must be reached. To me those that fall by the wayside seem to be the fortunate ones. They are thrown off from the fast revolving wheel, bruised but not broken. The danger comes to those who are precocious, who absorb all that is given, who can and will hold on; though dizzy they cling to their places. It sometimes happens that, in the most advanced of the "model" schools, extra classes are formed purely for the laggards, their safety valves are weighted and they are educated in spite of themselves. Certainly nothing has been left undone that human ingenuity could invent to properly educate the rising generation. Only the more advanced can reach the high and normal schools, and the curriculum has broadened, widened and deepened so as to include the various ometries, Latin, Greek, French, German, physiology, literature, composition, botany, chemistry, geology, physics and the other sciences. With each advance the meshes of the net grow smaller. Those who enter the "University" are the ones who have led in this race. They are the brightest in the land. They are the prize scholars from every high school in the State and they come prepared to fight for the leadership. Fortunately there is only room for one at the top; just which one of some dozen students it will be, each judges for himself. The rest, realizing that the gold medal is not for them, gradually withdraw from the race, enter upon congenial studies, and may receive great benefit from specialized work. The struggling twelve, absorbing all knowledge, not because of any particular love for a special subject, fight for the honor of high rank. Although I have been intimately associated with the University for twenty-five years, I have known but few honor men who have successfully fought the battle of life. I have known very many who have broken down completely and are now neurasthenics; or, at least, have not sufficient physical strength and nerve force to bear out the original estimate in which they were held.

Whether or not education brings success in life is not a question which should be discussed in this paper, yet, when all stress is laid on education and but little on the personal equation, results are always to be considered. A man should study for the personal pleasure it gives him, yet it is not an easy matter for graduates, even of the high schools, much less of the "University," to resume the spade and shovel, and resort to manual labor for a livelihood. Just what the outcome will be no one can yet predict. The question is now before us. We are all parasites on the body politic. Already sustenance is failing. At a meeting recently held in this city, it was shown that there were some thirteen thousand individuals each legally entitled to teach and all struggling for positions; but that there were only six thousand positions available. It is currently reported that there are more lawyers than clients, and we know how greatly overcrowded our own profession is. Are the standards to be raised as has already been proposed for the relief of this glut in the school market? If the best teachers were those best educated, and if knowledge of the theory and practice of medicine constituted the best physician, or if, as in China, a competitive examination was the only entrance to our positions of honor and trust, the question would be more easily answered. This whole subject is one for your serious reflection, especially as it affects the development of the child. You must remember that education is not all of the school. It begins with the first year in life, and far more depends on its home influences, its early impressions and even the life it leads through the whole of its school experience, than can be covered by a mere resume of its methods of study or the time this occupies. The American child, like American civilization, is progressive; it is our companion and friend; it associates with us; it enters into our conversation; it dines with us and it eagerly absorbs all gossip and newspaper news; it discusses our "modern problems," and it apes our ways of life. At six it attends the dancing school and gives exhibitions; at ten it is proficient in small talk, and at fourteen it wears a dress coat and leads the "German." It does all this while "pursuing" its studies and at a time in life when developmental processes demand a quiet environment.

I know that this hothouse development is not a prominent factor in the direct production of insanity, but I do believe that, in those possessing the nervous temperament, it encourages all the latent ills that belong to this family group, and that many individuals who, under normal surroundings and properly supervised and protected, would pass through life without exhibiting any nervous tendency, either develop a neurosis or at least beget the nervous diathesis in their children. I have read somewhere that the children of olden times made their supper on bread and milk and went to bed with the birds; that they ran barefooted and nursed stone bruises; that they were not paraded as prodigies, but were kept in the seclusion of their own homes. They did not advise their parents and direct social entertainments. It is even said that they did not have the same "educational advantages" that our children enjoy, and that the little schooling they did have was obtained during a few winter months. Education was certainly not forced on them, but they drank of the fountain of knowledge because they were thirsty. Yet they accomplished results; they laid the foundation of our greatness and they have left names behind them which we delight to honor.

INJURIES TO THE EYES DUE TO SUNSTROKE.

Read before the Medical Society of the State of California, April, 1900.

By A. B. McKee, M. D.

Hotz, in an article in the American Journal of Medical Sciences for July, 1879, says: "It is not uncommon to meet with cases of atrophy of the optic nerve ascribed to sunstroke. The arteries are narrowed, as if from inflammation, and in some cases an actual neuritis is present. Severe headache is a prominent symptom and the neuritis is probably secondary to acute cerebral congestion or meningitis." Hotz also mentions a case of exudative choroiditis, presumably due to the same cause. Nettleship observed a number of cases in which blindness of a small area at the center of the field was due to staring at the sun during an eclipse. Ophthalmoscopic evidences of choroiditis were found about the macula lutea. The symptoms often persist for months or even remain permanent. Similar changes are produced by snow or ice-blindness with the addition of congestion, intense pain, photophobia, contraction of the pupils, and conjunctival irritation. Nettleship ascribes these conditions to a prolonged stimulation of the retina, leading to congestion of its own vessels and those of the choroid. Lawrence, in a book on "Diseases of the Eye," published in 1854, speaks of injuries to sight, following sudden impressions made by powerfully luminous objects, as a flash of lightning or as the result of observing an eclipse. He makes the observation that the injurious effect of the luminous object is much greater, if combined with heat and exertion, hence the frequency of such accidents amongst soldiers on the march. Pepper, in his "System of Medicine," distinguishes two forms of insolation, heat-exhaustion and thermic fever. The former is due to the combination of heat and bodily exertion and is a condition of general exhaustion with paralysis of the vaso-motor system. It develops rapidly and may result in general unconsciousness. The temperature is subnormal.

In the second form, the symptoms are likely to appear suddenly, but may be preceded by a feeling of distress before the period of unconsciousness is reached. The characteristic symptom is the high temperature. There may be also chromatopsia, restlessness and even epileptiform convulsions. The sequel to such an attack is the inability of the patient to endure high temperatures, either sun or artificial heat, producing headache. The lesion is considered by him to be a meningo-cortical irritation. The presence of these last-named symptoms would seem to indicate that the cases below described actually suffered from heat-stroke; at the same time, the symptoms do not conform exactly to the commonest types of eye lesions the result of insolation, and, notwithstanding most careful examination of the fundus oculi, no pathological conditions could be detected.

These cases were kindly placed at my disposal through the courtesy of Dr. G. H. Richardson of the Presidio General Hospital. Corp. J. C. R. was overcome by the heat while in the Philippines last September. He became faint and dizzy, and suffered severely from headache, nausea and nervousness. Patient was able to resume the march some hours later. The history between this period and the onset of an attack of fever, two months later, is not clear, but the patient is inclined to ascribe his ocular symptoms to the September attack. He was confined to the hospital for a month, and since that time his sight is blurred, and objects in the center of the field present a smoky appearance. Exposure to sunlight or even the heat of a room or artificial light causes headache. The pain is located behind the eyes and in the temples. Movements of the eyes are more or less painful. The patient was first seen by me in February of the present year. Examination of the eyes showed a high degree of photophobia, with lachrymation. The vision was reduced to one-third, there was a relative central scotoma, extending vertically 10 degrees each side of the fixation point and horizontally slightly less. The field of vision was shrunken concentrically about 10 degrees. The color sense was not affected nor the field for colors disturbed. The discs appeared slightly hyperemic, but the margins were well-defined, the vessels of normal size, and the macular region free from any lesion. Six weeks later the vision had improved slightly and the scotoma had diminished in intensity. Any undue exposure caused a reappearance of the headache, photophobia and scotoma.

The second case is that of E. E., who after a severe march through a very dry country was seized during the afternoon with vertigo and blindness, and fell to the ground in an unconscious condition. The patient was taken to the hospital where he is said to have had numerous convulsions and a very high temperature. This was followed by severe pain in the temples and top of the head, brow and eyes, and an aching sensation throughout the whole body. Since that time, the sight has been bad and the eyes have seldom been free from pain. Exposure to sunlight, artificial light or heat of the room produces headache. The patient is unable to read but a few moments before severe pain follows and everything is enveloped in a bluish haze. As in the former case, the examination was made with considerable difficulty because of the great photophobia. The vision was 15-45, the field somewhat shrunken concentrically—about as much as in the other case—but the relative central scotoma extended 30-55 degrees in each direction from the fixation point. No pathological conditions were discovered in the background of the eye.

533 Sutter St.

HOSPITAL NOTES.

CALIFORNIA EYE AND EAR HOSPITAL.

By Louis C. Deane, M. D., Surgeon to the Hospital, etc.

A CASE—ILLUSTRATING THE VALUE OF THE MICROSCOPE IN THE DIAGNOSIS OF LARYNGEAL AFFECTIONS.

H. D. consulted me on April 5th, complaining of painful deglutition and pain in the larynx, with persistent coughing, especially in the morning. He gives a history of a primary syphilitic infection sixteen months past, with the usual secondary symptoms. He treated for a few months following with mercury, and then ceased. Since that time he has felt well except for the present symptoms. The cough had existed for three months, while the pain on swallowing had existed but two days. On examination, I found the posterior-pharyngeal wall and the fauces slightly reddened and congested. With the rhinoscope I noticed the presence of an ulcer on the post surface of the uvula, four millimeters in diameter, with a grayish base and without induration. With the laryngoscope I noticed a circumscribed swelling at the base of the right arytenoid cartilage, with apparently some induration. The surface was pinkish but pale, with two small yellowish patches not yet ulcerous. The cords were slightly reddened, but his voice was unimpaired. Lungs unaffected.

This case is reported for the purpose of showing how readily mistakes in diagnosis can follow where an imperfect laryngeal and microscopical examination is made. This case, with a clear specific history, shows an ulcerative process in the larynx and uvula. To the general practitioner, with limited advantages for laryngeal examination, it would have been "a clear case for specific treatment." On account of the position of the swelling and the peculiar anemic color of the enlargement, I was led to suspect a tuberculous affection rather than syphilitic. An examination of the sputum revealed the bacillus tuberculosis in great numbers. What part syphilis plays in the etiology of this case can only be conjectured. Kyle speaks of a mixed infection, but he states no particular case or what part each plays in the lesion. It is possible that the syphilis may have acted as a predisposing factor for a tuberculous infection.

L. C. Deane.

AN EPIDEMIC OF SWIMMING-TANK CONJUNCTIVITIS."

During the months of August and September of last year no fewer than eighteen young boys, ranging in age from ten to seventeen years, applied at the eye dispensary of Dr. Settegast in Berlin for treatment of an eye affection resembling in every way true trachoma. As there could be no reason for this unusual prevalence of the disease, trachoma appearing in Berlin almost entirely among that portion of the population coming from eastern Prussia and from Russia, an investigation was made, which resulted in the discovery that the entire eighteen had frequented the same public bath. This bath had a tank, measuring 40 feet by 32 feet, the water of which was changed twice a week. As it soon transpired that other oculists, among them Prof. Heischhez, were treating the Berlin youth for the same trouble, the bath-house in question was closed by the police. The supposed cases of trachoma were submitted to the usual trachoma treatment, to which they yielded completely in from four to six weeks, establishing thereby the fact that the disease was not trachoma but a new form of highly infectious conjunctivitis bearing a close resemblance to trachoma, but benign in its course. Dr. Neufeld, director of the Royal Prussian Institute for Infectious Diseases, examined five cases and reported that his bacteriological investigation resulted negatively. The clinical symptoms corresponded, as stated, to those of trachoma, and differed from those of the other familiar types of infectious conjunctivitis, such as those produced by the Koch-Weeks bacillus, the Morax-Axenfeld diplobacillus, the pneumo-coccus, etc., in that it did not begin so violently and that there was almost no swelling of the lids and very little secretion, while on the other hand all those characteristics were present which distinguish trachoma from those types of conjunctivitis. What is most remarkable in these cases is that the infectious agent, whatever it was, should have been present in the water in such quantity or such virulence as to make a tank of the dimensions stated a source of infection to a couple score of persons using it.

R. H. Cohn.

The Gargle. A Method of Gargling that is most Effective.

A very interesting article by Dr. S. T. Pope which appears in the last issue of the Occidental Medical Times prompts me to point out the following method of gargling. The gargle as it is usually employed is not effective simply because it does not reach the area intended to be medicated, as the article very clearly states. If, however, in the act of gargling, the head is thrown well back and the nose held with the thumb and forefinger, it will be found that the solution reaches the posterior wall of the pharynx very thoroughly and thus applies the medicament effectually to the soft palate, the uvula, the anterior and posterior pillars, the tonsils, the epiglotis and the posterior wall of the pharynx. By this method the parts named can be satisfactorily treated by the use of gargles. and, by its favorable action upon these parts, the structures that are contiguous to them, viz, the Larynx, Nasopharynx and Eustachian orifices. This, I believe, is more properly the limitations of the gargle, except in certain exceptional cases where the patient has developed great dexterity by allowing some of the solution to drop into the larynx and gargle it there or pass it up into the naso-pharynx and allow it to come out through the nose. By following the method above mentioned the gargle will be found a very satisfactory treatment and all that could possibly be expected of it.

R. Payne.

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THE MEETING OF THE STATE SOCIETY.

The thirtieth annual meeting of the State Society was not a brilliant success; and yet, in seeking for a reason, it is impossible to assign, to any one factor, the causative element. The program was quite up to the average in point of quality and was more abundant than is desirable. The Committee of Arrangements will freely be given credit for a great deal of hard work, yet, throughout the meeting, there was a coldness and general lack of interest against which it is impossible to contend, and that will inevitably dampen any gathering. One unfortunate feature, that has always characterized the San Francisco meetings, was, on this occasion, more prominent than usual, the very poor attendance of the local profession. Year by year it seems San Francisco physicians are becoming so engrossed with the labor of professional life, that they cannot find time for higher work or intellectual betterment. Perhaps this can be ascribed to the growing spirit of commercialism that bids fair, if unchecked, to make of medicine a trade, and of surgery a mere handicraft rather than an art. The element of trade and gain is very rife to-day, and, if it shall more rampantly be thrust forward, then indeed evil days have come upon us.

The program for this meeting presented the new feature of abstracts of the papers to be read. This, which is customary on a more extended scale in connection with the larger association meetings and congresses, failed utterly in the hoped-for direction of promoting discussion. This failure was due to a number of causes, some of which may be inferred from comments that we shall make later on, and was not inherent in the program itself. At the same time we believe the publication of such brief abstracts is of no value whatever and it is unlikely the experiment will be repeated for some years or, until conditions have changed. In all other respects the program was an excellent one. It did not quite approach in scientific interest that of last year, yet it was well up to the average. In mechanical detail and arrangement it was well put together and it was more neatly printed than for many years. Its chief fault was a redundance of material. The Committee of Arrangements may have felt that it was beyond its sphere to deal with this fecundity; yet committees in the future must find a means of handling this trouble or seek authority from the society to meet the emergency, when it arises.

For many years THE OCCIDENTAL MEDICAL TIMES has steadily advocated the development of the discussions at all society meetings and has pointed out that papers are a means of eliciting this feature. In 1888 it showed the society what this meant by furnishing, for the first time in that organization's existence, a full stenographic report of the proceedings. Time was when there was absolutely no discussion on papers, which were merely read and referred without comment. This has all been changed;

the appointment of a member to open the discussion breaks the ice, and the reporting of what is said fosters comment. Conditions have changed, the society has grown, and the changed conditions must be met by different methods.

There are three essential factors in the production of successful discussions. These are, in their order of importance (1) The Program; (2) The Speakers; (3) The Chair. All are necessary and all must harmonize. A fairly extended experience with medical society meetings and with the detail work in connection therewith, has convinced us that programs are generally overloaded. It may be laid down, axiomatically, that for the average session of a medical society lasting from two and one-half to three hours, four papers will be the maximum number that can be disposed of. Under exceptional circumstances an allowance of two papers an hour may be made. As sessions rarely last over three hours this will give six as a maximum. The proper disposal of two papers an hour will rest entirely with the Presiding Officer, and, unless he possess experience, firmness and tact, there will, inevitably be a failure. With an allowance of two papers an hour the time for the reading of each must be limited strictly to ten minutes. Giving each speaker five minutes will permit of only four taking part in the discussion on a paper. It will be noticed that no allowance is made for the inevitable waits between papers, for the breaks in the discussions or for additional speakers. All this must be subtracted from the five minute allowance, as the paper is assumed to be a fixed quantity.

These figures will stand the test of practical experience, and a little reflection will convince the reader of their accuracy. It will therefore be seen that when the Committee of Arrangements of the San Francisco meeting assigned eleven, ten and nine papers at various sessions it was attempting the impossible. The second factor we have mentioned is the speakers. Men who desire to speak on a paper should have something to say and they should say it. Self-evident as is this proposition it is rarely in evidence at our meetings. A few moments' consideration before rising will locate one's ideas and place them in order; it then only remains to deliver them, omitting everything not connected therewith. We are all familiar with the speaker who prefaces his remarks with the damning admission that he has "really nothing to add," and with the one that only indulges in complimentary references to the author and his production. Nor is the man of recognized ability and experience free from fault. Too often he quotes from text-books and publications accessible to all; instead of drawing upon his own experience, and giving the method that this has demonstrated is best. Reformation here is a slow process and education is tedious, but improvement is not impossible if men that are really interested in the society will learn by observation and profit by experience. These men are the readers of papers and the participants in the discussions.

There remains only one factor, the Chair, yet, while last he is by no means least. He has the power to bring order out of chaos and to correct the faults of poor management and judgment. He is also, unfortunately, the influence that may ruin the best program that can be presented and nullify every effort to produce results from the floor. The ability to preside over a large meeting does not come to all; nor is it every man that can successfully conduct business and preserve order at a stormy session. No one will deny this, and, yet, how rarely are these essential qualifications considered, when a presiding officer is chosen. Looking back for many years the really efficient presiding officers stand out with a distinctness born of infrequency, and judging from the past the rank of "eminent Chairman" is not likely to be overcrowded. While the duties of the chairman are mainly to preside and to maintain order, he has really very extended powers and these will always be freely conceded him by the meeting. He must, first, strictly enforce the law as he finds it; for in this alone, is protection for, and justice to, all. He must preserve, not only the rights of the individual, but he must remember that the meeting, collectively, has also rights that must be respected. When time limits have been assigned everyone on the floor must conform thereto. Should any speaker exceed the limit assigned him his attention must promptly be called to the fact. Similarly, when an author's paper stretches beyond its limit there is no course open to the Chair than to request him to resume his seat. Any other course that may be pursued, through mistaken motives of courtesy or leniency, are manifestly unfair to others that may desire to speak and to authors yet to read. The society that, as a body, may be more interested in something to come up later should also be considered. Similarly it is clearly out of order to entertain motions to extend the time of authors or speakers especially, and this is usually the case when the limit has long since been passed. This much for the authority of the Chair as defined by the by-laws. In addition there is for the tactful presiding officer a larger field. He can avoid difficulties, terminate acrimonious debates, suggest methods for the adjustment of vexed questions and greatly facilitate the transaction of business by pointing out the proper means.

A word as to the selection of a hall for our meetings. Where very rarely more than 100 are present at a session it is a mistake to provide accommodation for 600 or 1,000. Again where the business of a society consists in reading and speaking, in which all are supposed to participate and in which there is not an audience in the ordinary sense, a stage and proscenium are a very bad feature and galleries are equally undesirable. The stage separates the officers from the meeting instead of keeping both in touch, and much time is lost by authors and by speakers through delay in taking places. The galleries are decidedly in the way of those who have occupied seats under them, and sound conduction is seriously interfered with. Finally the close proximity of the hall to a paved street over which vehicles are constantly passing renders much of the proceedings unintelligible.

Sacramento has been selected as the place of next meeting. This selection was made by the society, largely of its own volition. It was rather an unusual procedure for a non-resident to present an invitation for a city as was done by a San Francisco physician upon this occasion. It is true, he stated he was authorized to do so by a member of the local profession, still, as far as we are aware, there was no official or collective action by the profession in this connection. We therefore prefer to believe that the society goes to Sacramento of its own volition and uninvited. This is as it should be and is in line with the course always advocated by The Medical Times. It relieves the local profession of any responsibility, and, if consistently pursued, permits of the society meeting at any point furnishing sufficient accommodation. We have, however, no

doubt that the profession of the Capital will cheerfully accept the assignment and we believe that the city's reputation for hospitality will be fully maintained.

SOCIETY PROCEEDINGS.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

DISEASE OF THE MEDIASTINUM.

Regular meeting March 13, 1900, President E. E. Kelly in the Chair.

Dr. W. S. Thorne reported a case of "Tuberculous Disease of the Mediastinum; Operation; Recovery."

Dr. E. L. Wemple, through Dr. Z. T. Malaby, reported "A Case of Suppurative Disease of the Mediastinum; Operation; Recovery."

Dr. Wm. Fitch Cheney reported "A Case of Sarcoma of the Mediastinum," which was first seen by Dr. Philip King Brown, who sent it to the Lane Hospital on Dec. 13, 1899, where they subsequently observed it together. History: Woman 37 years of age; married for four months; family history negative; patient had measles but no other diseases of childhood; she had never been ill up to the time of this complaint. Five months previous to entrance to the hospital, one month before her marriage, she had severe pain in her left shoulder which she thought was rheumatism, but there was no redness nor swelling and she was not compelled to take to bed. The first thing to attract attention after that was dyspnea. She noticed this about two months before we saw her, one morning when she got up, and it had persisted ever since. It increased upon any exertion, however slight. Urine became scanty, and she consulted a physician, who diagnosed the case as kidney disease because of the presence of albumen in the urine. She got no better under his care. The dyspnea persisted, she had dysphagia and a slight cough developed. When examined by us, well marked orthopnea was observed, as well as decided cyanosis of the face; all of her features seemed much swollen, edematous and distorted. She had noticed at times this extreme swelling not only in the face but in the right arm. There was no pain. On inspection the upper right side of the chest moved more than the left; there was some bulging of the left thorax in the region between the left border of the sternum and the left axillary line; the apex beat was obliterated. Palpation confirmed the fact that the upper right thorax moved more than the left; the apex beat could not be felt; over the bulging area there was entire absence of vocal fremitus. This area was decidely dull on percussion, and the area of dullness was like that characteristic of pericardial effusion. On auscultation the heart sounds were weak, rapid and distant. Urinary examination showed specific gravity of 1,014, large amount of albumen, many hyaline and granular casts, one epithelial cast. Blood examination showed 7,200 leucocytes, 4,200,000 red blood corpuscles, hemoglobin 92 per cent, and a practically normal differential count. The pulse was 133 and the temperature was a fraction over 99. A diagnosis of pericardial effusion was made and tapping of the pericardium was decided upon. This was undertaken by Dr. Stillman, who made several punctures in the third, fourth and fifth left interspaces close to the sternum. No fluid was obtained. The subsequent treatment was largely symptomatic. Absolute rest in bed; digitalis; calomel and salines; trional; strychnine to stimulate heart; small blisters over pericardium to stimulate absorption. During the time the patient remained in the hospital her average pulse was 120, her respirations 32, and the temperature was either normal or subnormal. The principal symptom the whole time was the dyspnea. On January 10th she left the hospital, but before she left she was very carefully gone over once more, with the object of confirming the diagnosis. The area of dullness was very nearly the same. It changed as the patient changed position. There was a flattening of the area when the patient sat erect. The conclusion finally reached was that she had a pericarditis with a great deal of thickening of the pericardium, with a small amount of fluid. The possibility of tumor of the mediastinum was not overlooked, but during the course of the illness there were times when it was thought that the apex beat could be made out well within the area of dullness, and within the left mammary line, while the area of dullness extended on the left side to the axillary line. The woman had not improved at all when she left the hospital. She died ten days later rather suddenly, the exact mode of death being unknown. That same day Dr. Brown made an autopsy and found the immense tumor of the mediastinum which I show you here. The heart was pushed over to the right by the tumor, and there were 21 ounces of fluid in the pericardium. The apex beat which was felt during life must have been transmitted to the chest wall through the tumor. Dr. Ophuls has examined the growth and pronounces it a lympho-sarcoma, originating in the peri-bronchial lymph glands.

Dr. C. G. Kenyon: "Dr. Cheney's case is a very startling one, as well as interesting. I do not remember of ever having had a case of mediastinal trouble. Dr. Wemple kindly called me to see his case when he first discovered its nature. He thought he had an abscess opening just below the sternum. He injected about a pint of fluid and it disappeared. We concluded that the trouble was mediastinal. These troubles are necessarily very obscure, and it is very difficult to determine whether we have a neoplasm or an inflammation."

Dr. Frisbie: "I think that Dr. Thorne is to be congratulated upon the promptness of his diagnosis, because he arrived at it very shortly after the patient came under his care."

Dr. Ophuls: "In regard to the pathological aspect of the tumor, which Dr. Cheney exhibited, there were two things which the neoplasm might be. It could be a round-celled sarcoma originating in the peribronchial lymph glands or in the thymus gland. I think this most likely a lympho-sarcoma of the peribronchial lymph glands. The structure shows a large number of small round cells, and in between them a reticulation of very fine connective tissue fibers."

Dr. Krotoszyner: "This morning I found mentioned in the Deut. Med. Wochensch. No. 8, 1900, a symptom of great value in the diagnosis of tumors of the mediastinum. It is called the Oliver Cardarelli symptom. The patient sits before the observer with the head a little backward. The physician grasps the cricoid cartilage between the two fingers of his left or right hand, and at the same time has the patient stop breathing. Then the symptom appears, the larynx making rhythmical pulsatory movements downwards. The author, M. Auerbach, claims that this is present in aneurism and also in mediastinal tumors. Another symptom (the Cardarelli symptom) as explained by him is as follows: The patient is in the same position. The physician gently pushes the larynx. A pulsatory movement of the larynx appears toward the opposite direction. This does not appear if the larynx is pushed toward the other side. Both these symptoms have appeared in cases described by the author."

Dr. M. Strunsky: "I think that the wisdom of surgical interference for tubercular disease of the mediastinum is satisfactorily confirmed. Unfortunately the knife, in the vast majority of instances, is not the proper means of treating it, for the following reason: Tubercular disease in the mediastinum is secondary to tubercular lesion in some other part of the body. A patient, for instance, having tuberculosis of the lungs gets, by infection or metastasis a tubercular lesion of the mediastinum. Surgical means in this instance would not be the proper thing. The condition would not be alleviated because there is a tubercular process in the lung, and, perhaps, many cavities. The operation, at the same time, might lower the vitality of the patient. Consequently this surgical interference can only be tried in primary cases."

Dr. Thorne: "With regard to the remarks of the gentleman who last spoke, the facts are, that in any tuberculous case where we have pus the common-sense view is to evacuate it. The facts show that such patients are relieved, and they recover. These are the facts whatever the theoretical considerations of the gentleman may be."

Dr. Malaby: "The causes of abscess of the mediastinum are apparently three: 1. Idiopathic; 2. Secondary; 3. Traumatic. The great majority are traumatic."

Dr. Cheney: "In regard to the X-ray examination, it was not made. It was considered, but we were of the opinion that with the amount of dullness there either was a tumor or fluid, and the X-ray would not have differentiated between the two."

Dr. Thorne: "Respecting the diagnosis, I take no credit to myself. Examination of the child's chest showed no features accounting for the difficulty of respiration. The respiratory sounds were normal. Causes embracing the respiratory process within the lung were excluded. There was high temperature and excessive pain referred to the sternum and immediate adjacent structures. Percussion along the costal cartilages gave a dull note. There was no fluid in the pericardial sac. The peculiar dry cough was almost like croup. We diagnosed the case by exclusion. The opening was made in the middle of the sternum and enlarged up and down."

PLUGGING OF THE LATERAL SINUS FOR ANGIOMA OF INTERNAL JUGULAR—RECOVERY.

Dr. Thorne reported a case of "Trephining and Plugging of the Lateral Sinus for Angioma of the Internal Jugular Vein, with Recovery."

BUBONIC PLAGUE.

Dr. D. W. Montgomery made a report of the case of bubonic plague recently found in Chinatown, stating that his position in the matter was secondary to the workers in the case, but that he had seen enough to become convinced that it was a case of the bubonic plague and nothing else. Dr. Kellogg, at the time the case was discovered, was working gratis for the city. Dr. Kinyoun was under no obligation to do the work for the city, but he did it, and worked hard. The discovery of the case showed Dr. Williamson, President of the Board of Health, to be on the alert. There is no great cause for alarm, but it should be a warning that Chinatown must be cleaned. It is the duty of every medical man to insist that Chinatown and the Latin quarter as well should be cleaned from top to bottom. It would be a fearful thing for this city to have an epidemic of the plague. The members of the Health Board (who are working under great difficulties, and receive no compensation and much abuse) should receive the strong support of the medical profession. The sewers should be flushed out with salt water. All the streets in Chinatown should be asphalted.

Dr. Kellogg: "Dr. Montgomery has told you most of the facts. On Tuesday, the 6th, I examined the case and removed the glands from which the examination was made. The plague bacillus was found. As the municipal laboratory is not properly equipped, on account of lack of funds, Dr. Kinyoun very kindly invited me to make use of his laboratory and animals. We inoculated two guinea pigs, a rat and one monkey. Post-mortem examination of the guinea pig number one showed extensive edematous area from axilla to groin; necrosis of tissues about site of inoculation; considerably enlarged and reddened inguinal glands. Pure culture of a short bacillus gave characteristic grouping.

Peritoneal cavity contained a small quantity of serum; spleen very friable and showing yellow spots. It contained an enormous number of short diplo-bacilli. Liver enlarged and containing several yellow spots like those in spleen. Mesenteric glands not much enlarged. Considerable fluid in pericardium. Guinea pig number two showed the same as the first one. All the animals showed typical reactions of the plague. The organism found answers in every way to the bacillus of the bubonic plague."

Dr. F. P. Wilson: "The case was evidently one of the bubonic variety with no pulmonic symptoms. It was impossible to get any history. In an indefinite way I learned that the man had been ill for four days. There were no spots on the body. Swollen glands were noticed in the right groin. There were two sets; one was at the apex of Scarpa's triangle and about the size of a silver dollar; the other was under Poupart's ligament and was the shape of an almond surrounded by inflamed tissue about the size of the palm of the hand. There was no suppuration in the gland and no other bubonic swelling."

GAERTNER'S TONOMETER.

Dr. A. W. Perry demonstrated the use of Gaertner's tonometer, a new instrument for measuring the blood pressure. He read a paper on the conditions in which its use would be valuable.

Dr. Perry: "The great advantage of this instrument in cases of nephritis is that many people go for years not knowing that they have nephritis, and it enables us to make the diagnosis early. The value is evident when we consider that albumen and casts do not show in the urine and the urea does not diminish until a few months before the person's death. With this we can diagnose the disease years ahead. Albuminuria is of little value, as shown in medical reports of the German Army, where albumen to the extent of three per cent is often found. In the form of nephritis occurring in children, of course, examination shows albumen and casts."

Dr. Cheney: "In an individual whose urine shows persistently no albumen and no casts, would Dr. Perry make a diagnosis by his instrument alone?"

Dr. Thorne: "I would like to ask Dr. Perry how he would differentiate between capillary sclerosis and concentric hypertrophy of the heart. The hydrostatic pressure of the blood current is in due relation to the caliber of the vessels and the thickness of the blood. In concentric hypertrophy of the heart, where you have increased action, you have an amount of blood thrown through the normal system of vessels that is very much larger and more dense than if the relative condition of the heart and arteries were normal, and you get a large full resisting pulse, which, in my judgment, would be indicated by your instrument."

Dr. Perry: "Concentric hypertrophy of the heart means constriction. If you can exclude aortic constriction you are bound to have capillary constriction. There may be a few exceptions; a man having a gouty attack or with spasm of the blood vessels would have the blood circulating through the vessels with more difficulty. In that case the administration of nitro-glycerine would make the diagnosis clear. If due to spasm the nitro-glycerine will immediately relieve it."

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, March 27, 1900.

"THE UNITED STATES PHARMACOPEIA."

President D. W. Montgomery in the chair.

Dr. A. L. Lengfeld read a paper entitled "Is the 'United States Pharmacopeia' a National Work?"

TETANUS—INTRACEREBRAL INJECTIONS OF ANTITOXIN—CURE.

Drs. Dudley Tait and G. E. Caglieri presented a report on a case of tetanus treated by intracerebral and intravenous injections of antitoxin. F. R., aged 41, employed in a factory, on January 1st, during an altercation, received a blow on the head with a rock, sustaining a lacerated wound. No attention was paid to it, the patient contenting himself with shaving the vicinity of the injured part. He resumed work on the 3d day and continued his usual occupation until January 23d. During the interval no dressing was applied; the patient wore his hat while at work, as was his custom. January 19th slight trismus was evident, which increased gradually. January 21st dysphagia and pain attending deglutition. January 24th he consulted his physician, who found a partly cicatrized scalp wound, discharging a serous fluid. The pulse was rapid, temperature not noted. Fracture with depression was suspected, and the patient sent to the French Hospital January 25th. The patient was seen at 2 p. m. His condition was briefly as follows: Partly healed lacerated wound of the scalp 5 cm. in length in the region of the obelion. Scant serous discharge. No edema of the surrounding parts, no adenopathy. Marked trismus and rigidity of the neck and anterior abdominal muscles. Slight opisthotonos. Lateral movement of the head still possible. Pupils equal and react to light; reflexes exaggerated. Retention of urine and feces. Deglutition difficult and painful. Risus sardonicus. Intellect clear; no dyspnea. Temperature 39.4 degrees, pulse 110, respiration 24. He had had no spasms prior to entering the hospital. At 4.20 p. m., during examination of the patient, flexion of the body caused a marked clonic convulsion, involving the head, body and limbs; 4:30 and 4:40 p. m. repetition of spasm. Spasmodic stricture of urethra prevents catheterization. At 5 p. m. the following treatment was instituted. Under cocain analgesia the skin was punctured with the point of a bistoury, and the skull perforated by means of a drill 3 mm. in diameter. No hemorrhage was encountered. Injection of 5 cc. of Parke, Davis & Co's antitoxin in the region of the right ascending frontal convolution, at a depth of 4 cm. Same technique on the opposite side, 4 cc. being injected in the middle frontal convolution to a depth of 5 cm. No sensation was noted by the patient during the operation, nor was there any change in the pulse or respiration. At the same time 22 cc. of antitoxin were given intravenously, and the head wound was curetted thoroughly. Stab cultures were attempted and a rabbit inoculated with the secretions of the injured part. Before leaving the operating table at 6 p. m., mild general spasm; 7 and 8 p. m. mild spasm involving head and neck; marked dysphagia; 9 p. m. patient able to swallow water; 12 p. m., T. 38.8 degrees, one mild spasm. At 8 a. m. the following day patient drinks milk without difficulty, T. 38.5 degrees. The entire day passes without spasms; 11 p. m. mild head spasm, and some delirium; T. 39.4, P. 102; 8 a. m. the third day, marked dysphagia, retention of urine and feces continue; T. 41.2; general convulsion lasting one hour caused by attempt to catheterize bladder; 9 a. m. intravenous injection of 18 cc. of antitoxin; 10 p. m., a series of short general spasms. Patient able to take milk and stimulants. 12 p. m., T. 41.5, pulse 154, respiration 38, violent general convulsion lasting five minutes and resulting in death. Temperature taken five minutes after death, 42.

In reporting this case we desire to call attention to the ease with which trephining may be performed under cocain analgesia. Kocher (June 3, 1899) was the first to use cocain analgesia in a case of intracerebral injection of antitoxin. Abbe, of New York, had recourse to the same method July 4, 1899, and reported his case in the Annals of Surgery March, 1900. The possibility of utilizing a very small drill (2 to 3 mm. in diameter) is also of interest. Our case may be added to the already long list of cases in which a prolonged period of incubation is not indicative of attenuated virulency. A better test of the virulency of the infection is perhaps the rapid progress of the symptoms after their development. It is also worthy of note that our case was subjected to no other medication than serotherapy. In the treatment of tetanus two methods only deserve our attention. Injections of carbolic acid, Bacelli's method, and serotherapy. Adopted and preferred by the majority of Italian physicians, Bacelli's method has given some remarkable results, but principally in Italy. In noting the astonishing frequency of reported cases of tetanus in that country, the slow occurrence of the symptoms, and especially the slight involvement of muscles of respiration and deglutition, one is forcibly struck by the mildness of the infection, and the great resemblance, in many instances, to epidemic cerebrospinal meningitis. For example, during 1891 and 1892 Tizzoni's serum was used in 10 cases. All ten cases recovered, in spite of the altogether insufficient dose of 1 and 2 cc. of serum used. It is, therefore, barely possible to conclude that the treatment by serum or carbolic acid is responsible for the enormous percentage of cures in that country. Babes, however, advises the use of carbolic acid whenever the antitoxin cannot be obtained. Koudratieff was the first to give a satisfactory explanation of the frequency of spontaneous cure of tetanus. He demonstrated experimentally the immunizing properties of the brain substance, and proposed as a method of treatment an emulsion of brain substance in saline solution. Six cases treated in accordance with this plan gave 5 cures. The treatment of tetanus by intracerebral injections of antitoxin is based on a series of experimental facts established by Roux and Sorrel. 1. That the tetanus toxin is taken up by the nerve cells, either through the nerves or by way of the blood from whence it is extracted by the nerve cells. 2. That tetanus is produced by a much smaller dose of toxin injected into the brain than administered subcutaneously. 3. Rabbits rendered immune to tetanus succumb to an intracerebral injection of toxin, which, if given by the skin, would not produce even a local reaction. 4. That the blood of rabbits immunized by intracerebral injections of antitoxin will prevent tetanus in the fresh rabbit inoculated by the cerebral route. Roux and Borrel concluded "that the antitoxin, when injected into animals, remains in the blood, whereas the toxin is extracted by the nerve cells. The antitoxin does not come in contact with the poison, the two substances, though so close, fail to meet. Therefore the serum is efficacous against the toxin, which is placed under the skin because the greater part enters the blood, but it proves powerless against the poison that has already reached the spinal and cerebral cells." Hence the frequent failures with subcutaneous and intravenous injections of serum in man. Roux and Borrel concluded that, to be of value, the antitoxin should be injected where the toxin is most active—into the central nervous system. Theory and experimentation agreed that antitoxin does not cure the existing cellular lesions, and if the medulla is already poisoned, death cannot be prevented. We have thought it of interest to collect all the cases of tetanus treated by intracerebral injections of antitoxin prior to January, 1900. A careful perusal of American and foreign journals, and especially of recent French and Italian theses, gives a total of 66 cases, with a mortality of 55 per cent. The most salient fact disclosed by this review was the extremely rapid and severe course of the disease in all the fatal cases. Intracerebral serotherapy in tetanus is still *sub judice*. So far, clinical evidence has not confirmed *in toto* the laboratory conclusions. The most that can be said is that in grave cases it has apparently reduced the mortality (Delvincourt, these de Paris, 1899). Nocard, after considerable experimentation on the horse, Tavel, Marchand and Kraus, conclude that antitoxin is without effect on the toxins already taken up by the nerve tissue, but is capable of preventing further development of toxin. Another factor of importance in computing the value of serotherapy is the source of the antitoxin, and in this respect it may be said that tetanus has passed through much the same phases as did diphtheria; the variable, uncertain and frequently inactive diphtheretic antitoxins were so numerous at one period that several state boards of health saw fit to publish the results of their comparative analyses, thereby warning the profession. Roux's antitoxin is considered extremely reliable and of the same strength as Behring's; Tizzoni's is 1-50; Babes', 1-2 the strength of Roux's. Parke, Davis & Co's serum is spoken of very highly in New York by Abbe and others. Anybody can manufacture antitoxins in this country, and no official test is required; we must rely upon the name and reputation of the manufacturer. According to Babes, anti-tetanic toxin is very unstable. Sicard was the first to use lumbar puncture for the injection of antitoxin in tetanus. His example was followed by Jacob, Schultz and others. The results were negative in all the cases. After Roux and Borrel had reported their researches at the Congress of Madrid, several surgeons, Kocher, Fowler, Boutillier and Rogers endeavored to perfect the operative part of the treatment by making the injection into the subdural space or into the lateral ventricles. This round-about mode of reaching the brain cells is not in accordance with Roux's and Borrel's experimental studies, as erroneously stated very recently by Laplace (Philadelphia Medical Journal, March 17, 1900), and should be abandoned.

Dr. Caglieri: "I have been very much interested in the question of the treatment of tetanus by injections of carbolic acid. The Italian journals very frequently cite cases cured by this treatment; recently sixty or seventy cases have been thus treated, with only two deaths. The reason the treatment failed in one of these cases is not known; in the other, not large enough doses of carbolic acid were injected. I think these cases are not as severe as those encountered in this country. The carbolic acid treatment is, however, first class, and practical on account of its price and accessibility; the price of the serum placing it beyond the reach of the poor. Its action has been disputed, but is most likely due to three things: 1. Phenol compounds lower temperature. 2. They are moderators of reflex excitability, full doses having an action somewhat like morphine. 3. The theory that they are neutralizing antidotes to toxins. Authorities vary regarding this, but I think the preponderance of opinion is in favor of this theory. To be of any value it must be administered in large doses, a one of two per cent solution injected hypodermically. One experimentor gives 10 cc. of a 1 per cent solution every two hours until results are obtained. I have never used it in tetanus, but would inject it around the site of the wound for its local effect. It has been used in puerperal infections with good results. In Italy they are using it in all infections; in anthrax, erysipelas, all sorts of phlegmons, and, in fact, any septicemic condition."

Dr. Kreutzmann: "I have not used carbolic acid injections in puerperal septicemia hypodermically, but have used irrigations of a 3 per cent solution of carbolic acid in puerperal infections, with good results, and, in the light of the remarks of Dr. Caglieri, one might think that some of the carbolic acid was absorbed, thereby explaining its beneficial effects."

Dr. Tait: "We have considered in detail the rational of intracerebral therapy, for the reason that of late several erroneous statements have been published in reference to tetanus. For instance, in the number of the Philadelphia Medical Journal dated March 17, 1900, Ernest Laplace of Philadelphia, seeks, by means of a most astounding theory, to explain the action of antitoxin when injected in the brain or by the subdural route. He first states that the antitoxin is the result of an anaerobic process, which, upon being injected under the skin, is absorbed (?) by the veins, going to the right heart, where it is fully aerated and oxygenized, a condition which possibly alters the aerobic nature of the antitoxin. On the contrary, direct intracerebral injection allows of immediate local action before the circulation can take it to the lungs. The oxygenic action of the antitoxin is decidedly novel, to say the least, and it might be suggested that in the animal from which the serum of antitoxin is taken, the circulation carries the antitoxin along the same route as that described by Laplace after its injection under the skin."

Dr. J. Henry Barbat: "In referring to the drilling of holes in the skull, there is no more pain in connection with such a procedure than in drilling a hole in a tooth. There is no necessity to bore a big hole. It has occurred to me that this would be a good method of diagnosis in suspected solid tumor of the brain. The great difficulty, in using these different antitoxins, is that they are questionable stuff. We do not know what is in them. The preparations of Parke, Davis & Co. are usually reliable. Their diphtheria antitoxin I know, from personal experience, is reliable."

"ERRORS AND ACCIDENTS."

Dr. H. J. Kreutzmann exhibited some specimens and reported the following: Case 1. Patient 34 years of age; married; two children, 8 and 10 years of age respectively: normal delivery; one miscarriage at the end of the first month, 7 years ago; general health has always been good, menstruation regular; the last menstruation at the time of treatment had passed the regular time; patient resorted to some means to bring on the flow and a profuse menstruation followed. Patient had been under treatment for pelvic trouble before and was again under treatment, when she began to complain about more pain in her abdomen. This pain gradually became quite intense. When I saw the patient she had a slight rise in temperature, 101 degrees; pulse 120; was slightly jaundiced; abdomen was much distended and extremely sensitive to touch. By vaginal, and more easily yet, by recto-vaginal examination, a fluctuation was discovered, distinct in the cul de sac. Adnexa could not be mapped out. Uterus found pushed toward the symphysis. From the history of the case and the condition of the patient, septic exudation of a serous or sero-purulent character was diagnosed in the pelvis. It was proposed to make an opening through the cul de sac, and when, 36 hours later, this was done under chloroform, a small amount of serous liquid and some blood clots were found to be present, besides some fresh blood oozing. Great care was taken in exploring from below. The possibility was taken into consideration that there was present either an injured uterus or a ruptured extra-uterine pregnancy. It was considered wise to open the abdomen, and this was done. The specimen I removed was a ruptured tubal pregnancy.

Case 2. Patient a woman 54 years of age, married, but had never been pregnant. She has noticed for some time a tumor in her abdomen, which has grown more and more, and has given her considerable discomfort. One physician of great experience diagnosed it as an ovarian tumor, another of equal standing diagnosed it as fibro-myoma of the uterus. When I saw the patient, fluctuation was most distinctly felt, but, being unable to locate the uterus, the diagnosis was left uncertain by me. When the incision of the abdomen was made, it was impossible to push the fingers into the pelvis on account of the adhesions around the tumor. The fluctuation in the presenting tumor was so distinct that I plunged a large-sized trocar into the tumor; no fluid escaped. I then thought it was a colloid tumor, and so cut an opening, when it became apparent that the tumor walls were muscular, and that it was a fibro-myoma of the uterus. The uterus was removed, when there was found in its cavity a tumor with a honey-combed appearance, emanating from the walls of the endometrium. The cavity and the place between the tumor mass was filled with a gelatinous colloid mass. Dr. Lois Nelson's microscopical examination showed it to be a fibro-myoma, the myomatous tissue prevailing.

Case 3. Patient 54 years of age; has borne 8 children, the youngest 17 years ago. Has been flowing freely for the last year, and has been failing in health. Patient presents a very marked cachectic appearance. Uterus is large, reaching midway to the umbilicus. When the patient was anesthetized and the uterine cavity dilated, it was found that there was a protrusion arising from the fundus; besides, both ovaries were enlarged to the size of a goose-egg (cystic). Taking into consideration the condition of the patient, her age, the condition of her uterus and ovaries, vaginal hysterectomy was done and the ovaries and tubes removed. Ligatures were used, and the incision was closed. Patient made an uneventful recovery; slept the night after operation; felt splendid. Six days after operation some stitches were removed, and the next day the patient noticed a discharge from her vagina. Examination showed that in the site of the incision a sloughing of the tissue had taken place, and there developed a vesico-vaginal fistula. It did not heal when the wound finally retracted. A secondary operation, performed some time after, closed the fistula.

Cases 4 and 5. Two similar cases of diseased appendages, resulting from salpingo-oophoritis, forming an almost inseparable mass of ovary and tube with cystic degeneration of the ovary. The cases were very similar as far as history and course is concerned. In both instances some infection as a result of a miscarriage was the underlying cause, both cases were chronic, resulting in many dense adhesions of all the parts concerned, with the broad ligament, uterus, and especially with the intestines. When enucleation was performed, it proved to be extremely difficult in both instances; laceration of the intestine, in one case of the sigmoid, in the other of the ilium, resulted. The laceration was immediately discovered, was trimmed and closed with sutures, but, owing to the infiltrated condition of the gut, the abdomen was not closed entirely, but a protective tamponade drainage at the lower angle of the wound was done; this, in my estimation, was the essential point in saving the patient's life. A similar case, where I did not employ drainage, resulted in death from rupture of the sutured intestine and peritonitis. This tamponade excludes an endangered part of the gut from the general peritoneal cavity; therefore, even if a rupture of the peritoneum occurs, it will then be extraperitoneal and the fistula will be in the course of the gauze, as I have seen happen in two cases. I have shown these specimens because they are interesting as such, but more so on account of the history connected with them, demonstrating some errors of diagnosis and accidents during operation.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE AND THROAT SURGEONS.

Regular Meeting, March, 1900.

Dr. Henry L. Wagner, President, in the chair.

Dr. Geo. W. Merritt presented two tabetic patients with white optic atrophy as illustrating that the atrophy of spinal disease is not always of the gray variety.

Dr. Geo. H. Powers presented a boy who some time ago had been struck on the left eye by a ball, causing traumatic cataract. Several needlings had been done and some vision recovered, but a rather dense membrane remained. The plane of the iris is far back, making the anterior chamber excessively deep, and a peculiar spongy black substance occupies the whole periphery of the anterior chamber.

Dr. K. Pischel thought that the black substance is simply the pigment layer of the iris exposed by the retraction separating the anterior layer.

Dr. G. H. Powers presented also a man who five days before had been injured by a bit of steel from a chisel, which had penetrated the cornea iris and lens near the superior periphery. The iris was torn away at its upper periphery. The lens, when he was first seen, was swollen and opaque. Two days later Dr. Powers had taken patient to Dr. Pischel, who had used his giant magnet. The "pulling" was felt when the circuit was closed, and a piece of steel weighing six grains suddenly jumped to the pole. There had been no reaction and there was perception of light, with ability to tell the direction of hand shadows.

Dr. Powers presented a third case. A young railroad employee in good health was taken with a sudden feeling of apprehension of impending calamity so that he could not work. Two physicians who attended him thought that there was cerebral lesion. In the meantime the patient had discovered, on unintentionally covering his left eye, that the right was blind, and this frightened him to the verge of collapse. On examination it was found that the tension of the blind eye was normal and that there are posterior synechia, opacity of the lens and evidences of suppuration. Dr. Powers would like an opinion as to whether there is any connection between the mental condition and that of the eye, and as to the advisability or not of removing the eye.

Dr. W. F. Southard presented a man showing the extensive ravages of tertiary syphilis. The right eye is deviated far upward and outward. Part of the palate is lost and the vertebra exposed. There is fair vision in the right eye.

Dr. R. W. Payne presented a rare case of corneal disease. The patient, a man of about 50, has worked many years in a smelter, being exposed to very irritating fumes. There is no specific or rheumatic history. On the cornea are elevations in patches, between which are clear transparent spaces. The elevations appear to be epithelial. Peritomy and curetting had improved the condition.

Dr. Southard had seen a similar case with Dr. Schloss in a child. The cornea was nearly covered with elevated opacities similar to those in Dr. Payne's case, the cornea being perfectly clear between. He had shaved off a piece of the growth, and this was found under the microscope to be epithelium. Nothing similar is described in the books.

"The Demonstration of the Tests for Muscular Anomalies" by Drs. F. B. Eaton and V. H. Hulen was next in order.

Dr. Eaton said that the subject is so wide that it would be necessary to limit his demonstration mainly to the tests for what is variously termed suppressed squint (Maddox), heterophoria (Stevens), and superable squint (Duane). All deviations are strabismic, the difference between strabismus and heterophoria being one of degree, not nature. Strabismus can conveniently be defined as the habitual absence of binocular vision, and it is important to determine when this is the case. Most of the tests are familiar, and only those would be dwelt upon which are misunderstood or neglected. To insure economy of time and accuracy some form of optometer must replace the trial frame, and one was shown which had been devised by Dr. Eaton after the one of Dr. Risley, which is largely used in Philadelphia, and which insures proper centering and leveling of lenses and double rotary prisms. It is fixed to the chair and renders the examination more rapid, exact, and less fatiguing to examiner and patient. The ultimate muscular condition should be found after careful correction of the refraction, but at the first consultation a certain routine of muscular tests is necessary to avoid error in prognosis and misunderstandings. Dr. Eaton makes the tests in the following order: Inspection. In addition to the ordinary observation of the movements when the eye follows a pen point, etc., attention was drawn to the value of the ophthalmoscopic corneal reflection as an objective test, first introduced by Priestly Smith. The patient fixes the hole in the mirror at nine inches and the reflections are referred to the cornea, not the pupil. This method is of particular value with infants, the light being thrown rapidly from one eye to the other. Colored Glasses. This test is familiar. Dr. Eaton had found that diplopia could be produced in all persons, provided the color is made intense enough. When diplopia is difficult of production he had found at 20 feet esophoria to be almost invariably present. Stevens has stated that 1 degree of hyperphoria by a red glass indicated habitual diplopia, and also 1 or 2 degrees of esophoria or exophoria, but Dr. Eaton had seen notable instances to the contrary. Screen. The screen or cover test is well known. It should be used in different parts of the field, for the near as well as for distance. Parallax. This test is generally made too rapidly. Maddox Rod. The light should be small, with a background of black velvet. The tangent scale at 20 feet is the best method of using. At this distance esophoria of over 10 degrees and exophoria over 8 or 10 degrees by the rod indicates generally habitual loss of binocular vision. For the near test Dr. Eaton has found the Edw. Jackson rod with Maddox's small tangent scale the best. A clear black line is formed by the cylinder that acts as a rod, out of the black head of the arrow. Prisms. In spite of its convenience, the Stevens phorometer is far less sensitive and accurate than the Maddox rod. This has also been the experience of Dr. Hubbell of Buffalo, who has shown that its findings, at least for distance, are unreliable. Both the rod and phorometer findings are modified by the range of accommodation; also by spasm of accommodation from atropine and intense light. Stevens states that with his horometer hyperphoria of over 4 degrees and lateral heterophoria of over 8 degrees indicates habitual absence of binocular fixation. Prism Abduction. Double rotary prisms, one before each eye, turned on simultaneously, give the abduction with absolute accuracy. Noyes and Valk object to them as deceptive. For the near, abduction of 16 to 20 degrees may be taken as normal. With good health, an abduction at 20 feet of 4 degrees can exist without asthenopia. Prism Adduction. At 20 feet 20 degrees, on to any amount, may be considered normal; for near, 30 to 40 degrees. The dictum of Risley that for distance the ratio of adduction to abduction is normally 3 to 1, has been found by Dr. Eaton to be a good working rule. Convergence Near-Point. This should be measured in metre-angles, the normal being, according to Landolt, 9 1-2 metre-angles on an average, or 4 1-8 inches from the eye; according to Duane it is 2 inches, and he considers 1 inch abnormal. For an average interocular distance 7 degrees of prism (refracting angle) equals one metre-angle. Error will occur unless, with presbyopia, the patient be given correction for four inches. The length of time the subject can hold convergence for near is to be observed. Monocular Field of Fixation. This is taking its place as an important test in muscular astheopia. There is disagreement as to the normal bounds. Stevens is at variance with all other observers. The method is of value in determining the muscle or muscles at fault in old cases of paresis with contraction of the antagonists and consequent concomitancy. Also, before operating, to indicate whether tenotomy or advancement is indicated, etc., Dr. Eaton had shown his own tropometer, by which he could measure the rotations with great accuracy.

Dr. Hulen, in beginning his demonstration, stated that he would give the tests as he himself had used them, and not as others had. He first inspected the face and skull as to possible asymmetry. He had not found muscular troubles at all connected with asymmetry. One muscular test will show abnormality, another none, hence we should employ a number of them. Dr. Hulen had found the Maddox rod test more accurate and searching than the Stevens phorometer; nevertheless, the latter instrument had given great satisfaction, owing to its great convenience. Stevens' Stenopaic Lens. This piece of apparatus Dr. Hulen had found very useful. It was the only test he was acquainted with that gives at once all the deviations vertical and horizontal. He rarely gives prisms as a prescription since they weaken the muscles and have to be increased in strength. He had watched Dr. H. D. Noyes, and had found his method of using square prisms the best. He demonstrated Dr. Noyes' holder, consisting of a central stem 20 inches long, graduated in cards and containing three cells before each eye, into which corrective glasses and square prisms can be used. This apparatus is also useful in determining the existence of spasm of accommodation. Dr. Hulen also demonstrated a small trial box he had had made to hold lenses and square prisms, and which he uses on the arm of a Stevens phorometer. The Stevens tropometer was then demonstrated, and Dr. Hulen believed this to be the best instrument devised for the purpose of measuring ocular rotations. On motion, the discussion of the demonstrations of Drs. Hulen and Eaton was deferred to the next regular meeting.